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## Self competence and psychological hardiness : self-efficacy as Moderator

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**Abstract.** The study aimed to determine the role that self-efficacy plays between self-competence and psychological resilience. The study sample consists of (278) individuals from two countries and to achieve the objectives of the study, we used the psychological resistance scale, the self-efficacy scale and the self-competence scale. The collection and statistical processing of information was performed using the statistical package for social sciences SPSS, and the following results were extracted: - self-efficacy does not act as a moderator between self-competence and psychological resistance. - the effect of self-efficacy occurs in psychological resistance and not as an effect in self-competence. - there are no significant differences in self-efficacy depending on the interaction between age and sex.

**Keywords.** Self competence, psychological hardiness, moderator

### Introduction

According to Bandora (1986), each person faces routine situations in his life, which require him to make a decision. The decision-making process is very important at all times of life, and it requires from the person skills that help him make decisions such as social skills that help in the communication process, engaging in social interactions with others. Establishing a large number of choices is based on how the individual trusts his or her ability and self-efficacy, which helps him or her make those choices. Self-efficacy contributes to decision-making on the behavior of the individual's activity and is related to social skills, which can influence the nature of dynamics. Thus, people who are described as having high self-efficacy and high social skills will generally make choices more easily than people with low autonomy and low social skills (Al mehsin, 2017).

Autoeficacitatea poate influența performanța atunci când persoana are abilitățile necesare pentru a-și alege atribuții. Este nevoie de un puternic sentiment de autoeficacitate pentru a persevera în îndatoriri atunci când o persoană se confruntă cu succes și eșecurile. Oamenii cu mai multe autoeficiență vor alege scopuri provocatoare și importante și sunt ferm

dedicații obligații lor. Persoanele cu autoeficiență scăzută sunt disperate și dezamăgite de probleme și obstacole (Shekarey și toți, 2010).

The self is the real essence of the individual, a concept that indicates the range of abilities and training that the individual possesses and distinguishes him from other members of society, defines him as an individual, as a personality and components.

This concept has received attention from scientists and researchers, especially in psychology and its various branches, because it has been linked to various concepts, including self-efficacy, self-competence and personal toughness.

### Hypotheses

- self-efficacy does not play a moderating role between self-competence and psychological resistance.
- it is claimed that there is a link between the effect of self-efficacy on self-competence and psychological resilience
- there are significant differences in self-efficacy depending on the interaction between age and sex.

### Objectives:

- determining the role that self-efficacy plays between self-competence and psychological resistance
- determines the effect of self-efficacy on self-competence and psychological resilience
- determining the interaction between age and sex for self-efficacy

### Literature Review:

In these steps, the researcher used as a method for literature analysis meta-analysis in which he relied on (9) studies (Shekarey, 2010), (Khaledian, 2013), (Zhang, 2015), (Ghalyan, 2016), (Nasiri, 2016), (Hashemi, 2017), (Al-mehsin, 2017), (Hammoud, 2018), (Golestane, 2018) and after analysis the following result was found:

```

Test for Heterogeneity:
Q(df = 8) = 647.9042, p-val < .0001

Model Results:

estimate      se      zval      pval      ci.lb      ci.ub      **
0.5142    0.1844    2.7888    0.0053    0.1528    0.8756

---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
' ' 1
  
```

```

tau^2      estimate      ci.lb      ci.ub
0.3003    0.5480    0.1339    1.1214
tau        98.8008    97.3499    99.6760
I^2(%)     83.3868    37.7349    308.6629
H^2
  
```

By these results, we recognize that the overall effect was 0.51, which means that there is an average effect, the inaccuracy of the results

The above result shows a high degree of inconsistency between the results of previous studies, where the estimate is 99.57% and is between the confidence level of 97.34% and 99.67%. This means a high degree of uncertainty in the estimate.

Regression Test for Funnel Plot Asymmetry  
model: mixed-effects meta-regression model  
predictor: standard error  
test for funnel plot asymmetry:  $z = -1.1902$ ,  $p = 0.2340$   
Rank Correlation Test for Funnel Plot Asymmetry  
Kendall's tau =  $-0.1111$ ,  $p = 0.7614$

The results can be seen that the value of the regression indication 0.23 and the value of the correlation coefficient 0.76. All are insignificant, which means that these variables cannot be linked together, but there may even be a variable that plays a role in moving an effect to another variable.

So, through the above, the results of the analysis of previous studies that have been studied (self-efficacy, self-competence and personal endurance). Not all studies addressed these three variables, which led researchers to try to study these three variables together in this current study. The result of the study indicated that there is a moderate effect of two variables on the one hand, which means that another variable plays a mediating role in moving the effect of the variable, so in this study we will try to examine the impact of self efficiency as a moderator. self and psychological resilience.

**Method:**

This study, which is "The impact of self-efficacy as a moderating variable between self-competence and psychological resilience" requires the use of the descriptive method, as it is appropriate to its nature, purposes and objectives.

**Study tools:**

**First: Self-efficacy scale**

1. Study tool description: The researchers used the Auto-Efficacy Scale by the "Sejin Park" researchers (2016).

**Here are the steps to find the tool:**

**1.1 Determining the goal of the tool:** The goal of the tool is to measure Self-Efficacy

**2.1 Sources for the formulation of the items of the scale:** The researchers relied on the study by " Sejin Park " (2016) which addressed Development and Validation of a Crisis Self-Efficacy Scale, The scale in its initial form includes (19) items

**3.1 Test correction method:** In assessing the degree of this scale grading, the existing alternatives were used (Strongly agree, agree, Neutral, Disagree, Strongly disagree) so that grades are given to alternatives (5, 4, 3, 2, 1)

## 1.2 Validity

**1.1.2 The sincerity of internal consistency:** The Pearson correlation coefficient was applied to determine the extent to which each item was associated with the overall score of the scale and the results showed retention (18) item as the values of the Pearson correlation coefficient for these item ranged from (0,311) to (0,767), which indicate the correlations of the item for the total sum, and these results indicate consistency. The remaining items of the scale are consistent, indicating that the scale is characterized by internal consistency, while item number (15) show low values of Pearson correlation coefficient (0.278) which mean this item will be delated from the scale, and the scale will be included (18) items

**2.2 Stability:** The value of the stability coefficient of 'Alpha Kornbach' is (0,895). This is a high value indicating that the tool has high stability.

### Second: Self-Competence

**1. Description of the study tool:** The researchers used **Self-Competence** by researchers "R.w. Tafarodi, W.B Swann Jr " (2001).

**1.1 Determining the goal of the tool:** The goal of the tool is to measure Self-Efficacy

**2.1 Sources for the formulation of the items of the scale:** The researchers relied on the "R.w. Tafarodi, W.B Swann Jr " (2001) which addressed Two-dimensional self-esteem : theory and measurment, to build the scale that includes (16) items

**3.1 Test correction method:** In assessing the degree of this scale grading, the existing alternatives were used (Strongly agree, agree, Neutral, Disagree, Strongly disagree) so that grades are given to alternatives (5, 4, 3, 2, 1)

## 1.2 Validity

**1.1.2 The sincerity of internal consistency:** The Pearson correlation coefficient was applied and the results showed retention (10) item as the values of the Pearson correlation coefficient for these item ranged from (0,343) to (0,639), while (6) items show low values of Pearson correlation coefficient (0.39) to (0.235) which mean this items will be delated from the scale, and the scale will be included (10) items

**2.2 Stability:** The value of the stability coefficient of 'Alpha Kornbach' is (0,762). This is a accepted value indicating that the tool has stability.

### Third: Personality hardiness

**1. Description of the study tool:** The researchers used **Personality hardiness** by researchers "Paul T.Bartone " (1995).

**1.1 Determining the goal of the tool:** The goal of the tool is to measure **Personality hardiness**

**2.1 Sources for the formulation of the items of the scale:** The researchers relied on the " Paul T.Bartone " (1995) which A Short Hardiness Scale, The scale in its initial form includes (15) items

**3.1 Test correction method:** In assessing the degree of this scale grading, the existing alternatives were used (Not at all true, A little true, Quite true, Completely true) so that grades are given to alternatives (1, 2, 3, 4)

## 1.2 Validity

**1.1.2 The sincerity of internal consistency:** The Pearson correlation coefficient was applied and the results showed retention (12) item as the values of the Pearson correlation coefficient for these item ranged from (0,387) to (0,656), while (3) items show low values of Pearson correlation coefficient (0.60) to (0.292) which mean this items will be delated from the scale, and the scale will be included (12) items

**2.2 Stability:** The value of the stability coefficient of 'Alpha Kornbach' is (0,820). This is a high value indicating that the tool has high stability.

### Study participants

300 individual from Romania and Algeria participated in this study, of which 204 were girls and 69 were boys while there is 5 missing values. The sample of Romania included 165 girls and 42 boys, while the sample of Algeria included 39 girls and 27 boys.

That different in number between boys and girls can justified by the fact that the number of student girls is higher than boys in both countries

**Table 1. show the frequency and the percent sample of the study**

sample		Frequency	Percent
Romania	Female	165	59.3
	Male	42	15.1
Algeria	Female	39	14
	Male	27	9.8
	missing	5	1.8
total	Female	204	73.3
	Male	69	24.9
	missing	5	1.8

The average age of the participants in Romania was 20.78 years, the minimum age was 17 years and the maximum age was 50 years, most of the respondents being 19 years old. while the participants in Algeria was 26.15 years the minimum age was 19 years and the maximum age was 55 years, most of the respondents being 23 years old.

190 of the participants from Romania there age was between 18 to 25 years old and 5 of the respondents were between 26 to 32 years old and 12 was more than 32 years old, and in Algeria 44 of the participants the age was between 18 to 25 years old and 9 from 26 to 32 years old and 9 was more than 32 years old, and according to table we recognize that there is missing value in the Algeria participants respondents to the age.

**Table 2. show the statistic of age to sample of the study**

Romania	N	Valid	207
		Missing	0
	Mean		20.78
	Median		19.00
	Mode		19
	Maximum		50
Algeria	N	Valid	62
		Missing	9
	Mean		26.15
	Median		23.00
	Mode		23
	Maximum		55

		Frequency	Percent
Romania	18-25 years	190	68.3
	26-32 years	5	1.8
	More than 32 years	12	4.3
Algeria	18-25 years	44	15.9
	26-32 years	9	3.2
	More than 32 years	9	3.2
	missing	9	3.2
Total	18-25 years	234	84.2
	26-32 years	14	5
	More than 32 years	21	7.6
	missing	9	3.2

**Hypothesis 1-** self-efficacy does not play a moderating role between self-competence and psychological resistance.



Figure 1. model of study  
Table 3. Regression Weights

	Estimate	S.E.	C.R.	P	Label
self.efficacy <--- self.competence	-,002	,092	-,022	,983	par_1
Psychological hardiness <--- self.competence	-,139	,047	-2,991	,003	par_2
Psychological hardiness <--- self.efficacy	,062	,031	2,022	,043	par_3

According to the figure and the table, that the regression coefficient of the effect of the independent variable on the moderator variable is -0,002. This means that there is low effect between the two variables, while the coefficient of the effect of the moderator variable on the dependent variable has reached its regression factor -0,139. This means that the intermediate variable does not affect the dependent variable, and the direct effect of an independent variable on the dependent variable with the moderator variable was 0,062 which means there is a low

effect, so that mean that self-efficacy don't play moderator role between self ompetence and psychological hardiness.

**Hypothesis 2-** it is claimed that there is a link between the effect of self-efficacy on self-competence and psychological resilience

**Table 4. Regression analyse between variable**

	B	self-efficacy		
		R	R-deux	sig
self competence	0,048	0,123	0,015	0,637
psychological hardiness	0,244			0,044

The table shows that the correlation between the study variable was 0.123 with a percentage of 12.3% and is a low correlation, and the coefficient of determination was (0.015), which means that self-change and psychological resilience belong to self-efficacy.

The table also shows the sign of self-competence was (0.637) and is higher than (0.05), which means that it is insignificant, there is no link between self-efficacy and self-competence, while the psychological resistance logo was (0.44) and is low by (0.05) and this means that there are significant differences between self-efficacy and psychological resistance.

Therefore self-efficacy effect in psychological hardiness and not effect in self competence, is assmed that there is interaction between age and gender in effect of self efficacy

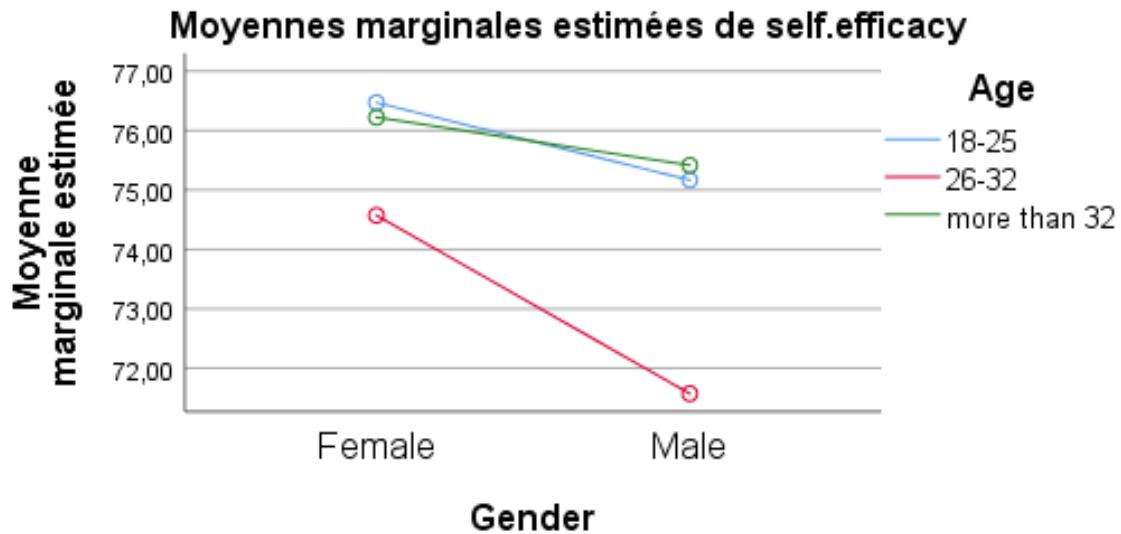
**Table 5. Tests des effets intersujets**

Source	Somme des carrés de type III	ddl	Carré moyen	F	Significatio n
Modèle corrigé	230,342 <sup>a</sup>	5	46,068	,482	,790
Constante	398851,031	1	398851,031	4169,177	,000
Gender	51,547	1	51,547	,539	,464
Age	97,747	2	48,873	,511	,601
Gender * Age	11,104	2	5,552	,058	,944
Erreur	25064,654	262	95,667		
Total	1573415,000	268			
Total corrigé	25294,996	267			

According to the table It turns out that there is no difference in the effect in gender Where we find sig value (0,464) and its high than (0,05) and there also no difference in the effect in age and what sig value show (0,601) its high than (0,05).

**Hypothesis 3** - there are significant differences in self-efficacy depending on the interaction between age and sex.

The result also show that there is no interaction between age and gender in effect of self efficacy and that what sig confirme it (0,944) its high than (0,05) which mean there is no difrrent significant in self efficacy according to interaction between age and gender.



**Figure 2. show the interaction between age and gender**

The figure shows that girls between the ages of 26 and 32 are taller than girls between the ages of 18 and 25 and over the age of 32, while the difference between boys between the ages of 26 and 32 is older than boys aged between 18 and 25 and over 32 years.

#### **Conclusion**

At the end of the research, based on the results of the study and the statistical analysis for the data obtained according to the objectives of the study, the study was based on a set of hypotheses from which the researchers drew the following conclusions:

- that self-efficacy does not act as a moderator between self-competence and psychological resistance.
- effect of self-efficacy in psychological resistance and not effect in self-competence.
- there are no significant differences in self-efficacy depending on the interaction between age and sex.

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